Rec'd PCT/PTO 12 NOV 2605

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



| 1547|| #301|| 1040|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054|| 1054

(43) International Publication Date 29 December 2004 (29.12.2004)

PCT

(10) International Publication Number WO 2004/112767 A1

(51) International Patent Classification⁷:

A61K 31/065

(21) International Application Number:

PCT/US2004/019972

(22) International Filing Date:

21 June 2004 (21.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/479,507

19 June 2003 (19.06.2003) US

- (71) Applicant (for all designated States except US): AD-VANCED BIONUTRITON CORPORATION [US/US]; 6430 Dobbin Road, Suite C, Columbia, MD 21045 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HAREL, Moti [US/US]; 2012 Masters Drive, Baltimore, MD 21209 (US). PIECHOCKI, John [US/US]; 8710 Meadow Wood Court, Odenton, MD 21113 (US). KYLE, David, J. [US/US]; 1801 Narbeth Road, Catonsville, MD 21228 (US).
- (74) Agents: COLBY, Gary, D. et al.; Duane Morris LLP, One Liberty Place, Philadelphia, PA 19103-7396 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED ABSORPTION OF FAT-SOLUBLE NUTRIENTS

(57) Abstract: Carotenoids are provided as dietary supplements to animal feed. These supplements improve the bioavailability of carotenoids by providing them in combination with phospholipids. The invention provides animal feeds for aquatic and terrestrial animals, and methods for making the feeds.

